

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

In Re the Application of:

Christopher Malyszewicz

Patent No. 7,915,216

Issue Date: March 29, 2011

Serial No.: 10/556,481

Filed: November 14, 2005

Confirmation No.: 1232

Atty. File No.: 077747-010100

For: "ANTI-VIRAL AND ANTI-BACTERIAL CLEANING COMPOSITION"

**REQUEST FOR EXPEDITED**  
**CERTIFICATE OF**  
**CORRECTION FOR PTO**  
**MISTAKE**  
**(37 C.F.R. § 1.322(a))**

It is hereby certified that this correspondence is being transmitted to the United States Patent and Trademark Office via the USPTO electronic filing system no later than 11:59 PM local time on June 15, 2011.

Signed:

Name: Marilyn Morris

Attention: Certificate of Correction Branch  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Dear Sir:

This is a request for an Expedited Certificate of Correction for mistakes solely incurred through the fault of the United States Patent and Trademark Office, which mistake is clearly disclosed in the records of the Office (37 C.F.R. § 1.322(a)). In particular, a second foreign priority claim, PCT/GB03/03296, filed July 30, 2003, was omitted in section (30) of the bibliographic data; and the phrase "according to claim 35" was inserted in the wrong place in claim 7 (prosecution claim 66). Documentation that unequivocally supports the patentee's assertion is attached hereto.

The cover page of the International Application, containing both foreign priority claims, and a copy of the Declaration filed at the time of national phase entry in the United States also containing both priority claims, are attached as Appendix A.

In the Examiner's Amendment received with the Notice of Allowance, the Examiner wrote, "At line 3 of claim 66, insert ---according to claim 35--- after "composition"." Line 3 of claim 66 (issued claim 7) contained two occurrences of the word "composition". The phrase --according to claim 35--- should have been inserted after the first occurrence of the word "composition," but was inserted after the second occurrence of the word "composition". As instructed by the Examiner in the Examiner's Amendment the phrase ---according to claim 35-- (claim 35 is issued claim 1) was correctly inserted in prosecution claim 64 (issued claim 6), after the first occurrence of the word "composition" in the sentence at line 3 of claim 64. Enclosed are the Examiner's Amendment accompanying the Notice of Allowance, mailed January 7, 2011 (Appendix B), the Amendment filed December 9, 2010, showing the final listing of the claims by the Applicant (Appendix C), and column 8 of the issued patent containing claim 6 (prosecution claim 64) and claim 7 (prosecution claim 66) (Appendix D).

Issued claim 7 (prosecution claim 66) should be corrected as follows:

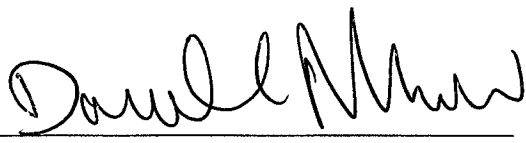
7. A means of inhibiting the ability of bacteria and/or viruses to replicate when said bacteria and/or viruses are present on a surface, the means comprising the application of a composition according to claim 1 to said surface wherein the composition ~~according to claim 1~~ is configured to substantially permanently encapsulate the bacteria or virus and prevent the replication of their genetic material, wherein the solution of claim 1 is provided.

Applicants therefore respectfully request that the above-identified patent be expeditiously corrected as provided above. A completed Certificate of Correction form (PTO/SB/44) is included as Appendix E.

It is not believed that any fees are due in connection with this correspondence. However, any necessary fees may be charged to Deposit Account No. 50-2775.

Respectfully Submitted,

Dated: June 15, 2011

By: 

Danielle K. Morrow, Reg. No. 65,582  
GREENBERG TRAURIG LLP  
1200 17<sup>th</sup> Street, Suite 2400  
Denver, CO 80202  
Tel: (303) 572-6500  
Fax: (303) 572-6540

# APPENDIX A

(19) World Intellectual Property  
Organization  
International Bureau



(43) International Publication Date  
25 November 2004 (25.11.2004)

PCT

(10) International Publication Number  
**WO 2004/101726 A2**

(51) International Patent Classification<sup>7</sup>: C11D 3/00, 1/40,  
3/20, 3/02, A61L 2/18, A01N 31/02, 31/04, 59/12, 59/00

(21) International Application Number:  
PCT/GB2004/002148

(22) International Filing Date: 17 May 2004 (17.05.2004)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:  
0311174.7 15 May 2003 (15.05.2003) GB  
PCT/GB03/03296 30 July 2003 (30.07.2003) GB

(71) Applicant (for all designated States except US): GREEN-  
BRIDGE ENVIRONMENTAL CONTROL LIMITED  
[GB/GB]; Saint Bartholomews, Lewins Mead, Bristol, BS1  
2NH (GB).

(72) Inventor; and

(75) Inventor/Applicant (for US only): MALYSZEWICZ,  
Christopher [GB/GB]; 12 Waggoners Way, Bugbrooke,  
Northampton, Northamptonshire NN7 3QT (GB).

(74) Agents: CARLIN, Robert, George et al.; Olswang, 90  
High Holborn, London, WC1V 6XX (GB).

(81) Designated States (unless otherwise indicated, for every  
kind of national protection available): AE, AG, AL, AM,  
AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN,  
CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI,  
GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE,  
KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD,  
MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG,  
PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM,  
TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM,  
ZW.

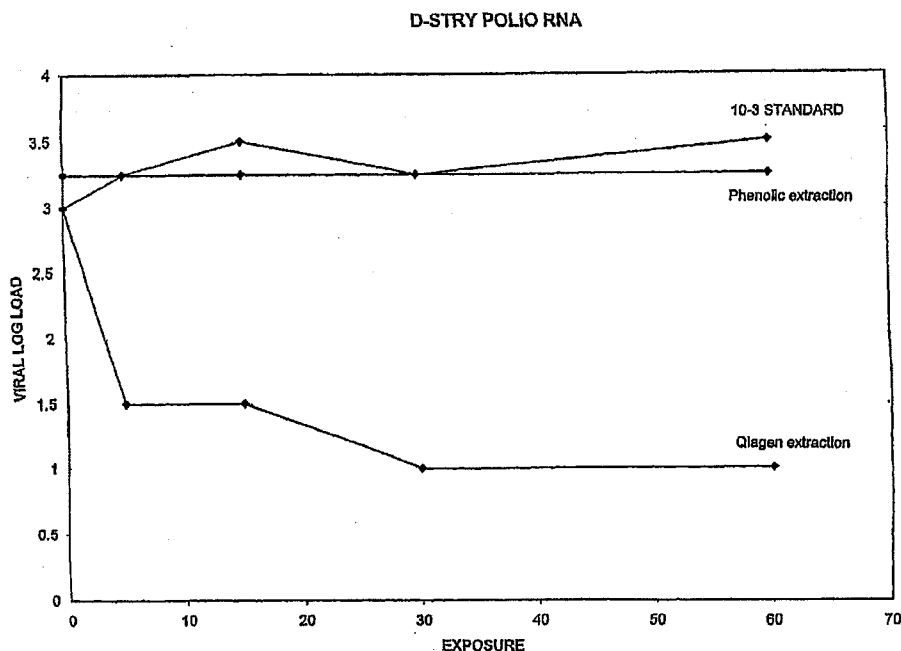
(84) Designated States (unless otherwise indicated, for every  
kind of regional protection available): ARIPO (BW, GH,  
GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM,  
ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM),  
European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI,  
FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI,  
SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ,  
GW, ML, MR, NE, SN, TD, TG).

**Declarations under Rule 4.17:**

— as to applicant's entitlement to apply for and be granted  
a patent (Rule 4.17(ii)) for the following designations AE,  
AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ,  
CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE,  
EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS,

[Continued on next page]

(54) Title: ANTI-VIRAL AND ANTI-BACTERIAL CLEANING COMPOSITION



(57) Abstract: A composition comprising at least one alcohol, at least one long-chain alkyl polyamine, and at least one halogen which is suitably for application to a surface and substantially microbial contamination.

**Box No. VIII (iv) DECLARATION: INVENTORSHIP** (only for the purposes of the designation of the United States of America)  
*The declaration must conform to the following standardized wording provided for in Section 214; see Notes to Boxes Nos. VIII, VIII (i) to (iv) (in general) and the specific Notes to Box No. VIII (iv). If this Box is not used, this sheet should not be included in the request.*

**Declaration of Inventorship (Rules 4.17(iv) and 51bis.1(a)(iv))**  
**for the purposes of the designation of the United States of America**

I hereby declare that I believe I am the original, first and sole (if only one inventor is listed below) or joint (if more than one inventor is listed below) inventor of the subject matter which is claimed and for which a patent is sought.

This declaration is directed to the international application of which it forms a part (if filing declaration with application).

This declaration is directed to international application No. PCT/..... (if furnishing declaration pursuant to Rule 26ter).

I hereby declare that my residence, mailing address, and citizenship are as stated next to my name.

I hereby state that I have reviewed and understand the contents of the above-identified international application, including the claims of said application. I have identified in the request of said application, in compliance with PCT Rule 4.1b, any claim to foreign priority, and I have identified below, under the heading "Prior Applications," by application number, country or Member of the World Trade Organization, day, month and year of filing, any application for a patent or inventor's certificate filed in a country other than the United States of America, including any PCT international application designating at least one country other than the United States of America, having a filing date before that of the application on which foreign priority is claimed.

Prior Applications: GB 031174-7  
PCT/GB 03/03296

I hereby acknowledge the duty to disclose information that is known by me to be material to patentability as defined by 37 C.F.R. § 1.56, including for continuation-in-part applications, material information which became available between the filing date of the prior application and the PCT international filing date of the continuation-in-part application.

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like are made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

Name: Malyszewicz, Christopher

Residence: Northampton, Northamptonshire  
 (city and either US state, if applicable, or country)

Mailing Address: 12 Waggoners Way, Rugbrooke, Northampton, Northamptonshire, NN7 3QT, United Kingdom

Citizenship: British

Inventor's Signature: [Signature] Date: 14/5/04  
 (if not contained in the request, or if declaration is corrected or added under Rule 26ter after the filing of the international application, the signature must be that of the inventor, not that of the agent) (of signature which is not contained in the request, or of the declaration that is corrected or added under Rule 26ter after the filing of the international application)

Name: .....

Residence: .....  
 (city and either US state, if applicable, or country)

Mailing Address: .....

Citizenship: .....

Inventor's Signature: ..... Date: .....  
 (if not contained in the request, or if declaration is corrected or added under Rule 26ter after the filing of the international application, the signature must be that of the inventor, not that of the agent) (of signature which is not contained in the request, or of the declaration that is corrected or added under Rule 26ter after the filing of the international application)

☐ This declaration is continued on the following sheet, "Continuation of Box No. VIII (iv)".

## APPENDIX B



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

## NOTICE OF ALLOWANCE AND FEE(S) DUE

7590

01/07/2011

Richard E Kurtz II  
Greenberg Traurig  
Suite 1200  
1750 Tysons Boulevard  
McLean, VA 22102

EXAMINER

HARDEE, JOHN R

ART UNIT

PAPER NUMBER

1761

DATE MAILED: 01/07/2011

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/556,481	11/14/2005	Christopher Malyszewicz	76241.010500	1232
TITLE OF INVENTION: ANTI-VIRAL AND ANTI-BACTERIAL CLEANING COMPOSITION				

APPLN. TYPE	SMALL ENTITY	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	YES	\$755	\$300	\$0	\$1055	04/07/2011

THE APPLICATION IDENTIFIED ABOVE HAS BEEN EXAMINED AND IS ALLOWED FOR ISSUANCE AS A PATENT. **PROSECUTION ON THE MERITS IS CLOSED.** THIS NOTICE OF ALLOWANCE IS NOT A GRANT OF PATENT RIGHTS. THIS APPLICATION IS SUBJECT TO WITHDRAWAL FROM ISSUE AT THE INITIATIVE OF THE OFFICE OR UPON PETITION BY THE APPLICANT. SEE 37 CFR 1.313 AND MPEP 1308.

THE ISSUE FEE AND PUBLICATION FEE (IF REQUIRED) MUST BE PAID WITHIN **THREE MONTHS** FROM THE MAILING DATE OF THIS NOTICE OR THIS APPLICATION SHALL BE REGARDED AS ABANDONED. **THIS STATUTORY PERIOD CANNOT BE EXTENDED.** SEE 35 U.S.C. 151. THE ISSUE FEE DUE INDICATED ABOVE DOES NOT REFLECT A CREDIT FOR ANY PREVIOUSLY PAID ISSUE FEE IN THIS APPLICATION. IF AN ISSUE FEE HAS PREVIOUSLY BEEN PAID IN THIS APPLICATION (AS SHOWN ABOVE), THE RETURN OF PART B OF THIS FORM WILL BE CONSIDERED A REQUEST TO REAPPLY THE PREVIOUSLY PAID ISSUE FEE TOWARD THE ISSUE FEE NOW DUE.

### HOW TO REPLY TO THIS NOTICE:

#### I. Review the SMALL ENTITY status shown above.

If the SMALL ENTITY is shown as YES, verify your current SMALL ENTITY status:

A. If the status is the same, pay the TOTAL FEE(S) DUE shown above.

B. If the status above is to be removed, check box 5b on Part B - Fee(s) Transmittal and pay the PUBLICATION FEE (if required) and twice the amount of the ISSUE FEE shown above, or

If the SMALL ENTITY is shown as NO:

A. Pay TOTAL FEE(S) DUE shown above, or

B. If applicant claimed SMALL ENTITY status before, or is now claiming SMALL ENTITY status, check box 5a on Part B - Fee(s) Transmittal and pay the PUBLICATION FEE (if required) and 1/2 the ISSUE FEE shown above.

II. PART B - FEE(S) TRANSMITTAL, or its equivalent, must be completed and returned to the United States Patent and Trademark Office (USPTO) with your ISSUE FEE and PUBLICATION FEE (if required). If you are charging the fee(s) to your deposit account, section "4b" of Part B - Fee(s) Transmittal should be completed and an extra copy of the form should be submitted. If an equivalent of Part B is filed, a request to reapply a previously paid issue fee must be clearly made, and delays in processing may occur due to the difficulty in recognizing the paper as an equivalent of Part B.

III. All communications regarding this application must give the application number. Please direct all communications prior to issuance to Mail Stop ISSUE FEE unless advised to the contrary.

**IMPORTANT REMINDER:** Utility patents issuing on applications filed on or after Dec. 12, 1980 may require payment of maintenance fees. It is patentee's responsibility to ensure timely payment of maintenance fees when due.

# **PART B - FEE(S) TRANSMITTAL**

Complete and send this form, together with applicable fee(s), to: **Mail** **Mail Stop ISSUE FEE**  
**Commissioner for Patents**  
**P.O. Box 1450**  
**Alexandria, Virginia 22313-1450**  
**or Fax** **(571)-273-2885**

**INSTRUCTIONS:** This form should be used for transmitting the ISSUE FEE and PUBLICATION FEE (if required). Blocks 1 through 5 should be completed where appropriate. All further correspondence including the Patent, advance orders and notification of maintenance fees will be mailed to the current correspondence address as indicated unless corrected below or directed otherwise in Block 1, by (a) specifying a new correspondence address; and/or (b) indicating a separate "FEE ADDRESS" for maintenance fee notifications.

CURRENT CORRESPONDENCE ADDRESS (Note: Use Block 1 for any change of address)

Note: A certificate of mailing can only be used for domestic mailings of the Fee(s) Transmittal. This certificate cannot be used for any other accompanying papers. Each additional paper, such as an assignment or formal drawing, must have its own certificate of mailing or transmission.

7590

01/07/2011

Richard E Kurtz II  
Greenberg Traurig  
Suite 1200  
1750 Tysons Boulevard  
McLean, VA 22102

## **Certificate of Mailing or Transmission**

I hereby certify that this Fee(s) Transmittal is being deposited with the United States Postal Service with sufficient postage for first class mail in an envelope addressed to the Mail Stop ISSUE FEE address above, or being facsimile transmitted to the USPTO (571) 273-2885, on the date indicated below.

(Depositor's name)
(Signature)
(Date)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/556,481

11/14/2005

Christopher Malyszewicz

76241.010500

1232

TITLE OF INVENTION: ANTI-VIRAL AND ANTI-BACTERIAL CLEANING COMPOSITION

APPLN. TYPE	SMALL ENTITY	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	YES	\$755	\$300	\$0	\$1055	04/07/2011

EXAMINER	ART UNIT	CLASS-SUBCLASS
HARDEE, JOHN R	1761	510-499000

1. Change of correspondence address or indication of "Fee Address" (37 CFR 1.363).  
☐ Change of correspondence address (or Change of Correspondence Address form PTO/SB/122) attached.  
☐ "Fee Address" indication (or "Fee Address" Indication form PTO/SB/47; Rev 03-02 or more recent) attached. Use of a Customer Number is required.

2. For printing on the patent front page, list  
(1) the names of up to 3 registered patent attorneys or agents OR, alternatively, 1 \_\_\_\_\_  
(2) the name of a single firm (having as a member a registered attorney or agent) and the names of up to 2 registered patent attorneys or agents. If no name is listed, no name will be printed. 2 \_\_\_\_\_  
3 \_\_\_\_\_

## **3. ASSIGNEE NAME AND RESIDENCE DATA TO BE PRINTED ON THE PATENT (print or type)**

PLEASE NOTE: Unless an assignee is identified below, no assignee data will appear on the patent. If an assignee is identified below, the document has been filed for recordation as set forth in 37 CFR 3.11. Completion of this form is NOT a substitute for filing an assignment.

(A) NAME OF ASSIGNEE

(B) RESIDENCE: (CITY and STATE OR COUNTRY)

Please check the appropriate assignee category or categories (will not be printed on the patent): ☐ Individual ☐ Corporation or other private group entity ☐ Government

## **4a. The following fee(s) are submitted:**

- ☐ Issue Fee  
☐ Publication Fee (No small entity discount permitted)  
☐ Advance Order - # of Copies \_\_\_\_\_

## **4b. Payment of Fee(s): (Please first reapply any previously paid issue fee shown above)**

- ☐ A check is enclosed.  
☐ Payment by credit card. Form PTO-2038 is attached.  
☐ The Director is hereby authorized to charge the required fee(s), any deficiency, or credit any overpayment, to Deposit Account Number \_\_\_\_\_ (enclose an extra copy of this form).

## **5. Change in Entity Status (from status indicated above)**

- ☐ a. Applicant claims SMALL ENTITY status. See 37 CFR 1.27. ☐ b. Applicant is no longer claiming SMALL ENTITY status. See 37 CFR 1.27(g)(2).

NOTE: The Issue Fee and Publication Fee (if required) will not be accepted from anyone other than the applicant; a registered attorney or agent; or the assignee or other party in interest as shown by the records of the United States Patent and Trademark Office.

Authorized Signature \_\_\_\_\_

Date \_\_\_\_\_

Typed or printed name \_\_\_\_\_

Registration No. \_\_\_\_\_

This collection of information is required by 37 CFR 1.311. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, Virginia 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450.

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.





# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/556,481	11/14/2005	Christopher Malyszewicz	76241.010500	1232
7590 01/07/2011				
Richard E Kurtz II Greenberg Traurig Suite 1200 1750 Tysons Boulevard McLean, VA 22102				
EXAMINER HARDEE, JOHN R				
ART UNIT 1761 PAPER NUMBER				
DATE MAILED: 01/07/2011				

## Determination of Patent Term Adjustment under 35 U.S.C. 154 (b) (application filed on or after May 29, 2000)

The Patent Term Adjustment to date is 0 day(s). If the issue fee is paid on the date that is three months after the mailing date of this notice and the patent issues on the Tuesday before the date that is 28 weeks (six and a half months) after the mailing date of this notice, the Patent Term Adjustment will be 0 day(s).

If a Continued Prosecution Application (CPA) was filed in the above-identified application, the filing date that determines Patent Term Adjustment is the filing date of the most recent CPA.

Applicant will be able to obtain more detailed information by accessing the Patent Application Information Retrieval (PAIR) WEB site (<http://pair.uspto.gov>).

Any questions regarding the Patent Term Extension or Adjustment determination should be directed to the Office of Patent Legal Administration at (571)-272-7702. Questions relating to issue and publication fee payments should be directed to the Customer Service Center of the Office of Patent Publication at 1-(888)-786-0101 or (571)-272-4200.

<b>Notice of Allowability</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/556,481	MALYSZEWICZ, CHRISTOPHER	
	<b>Examiner</b>	<b>Art Unit</b>	
	JOHN R. HARDEE	1761	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--**

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to applicant's RCE and IDS, and the attached examiner's amendment.
2. ☒ The allowed claim(s) is/are 35, 40, 41, 54, 55, 64, 66 and 73-80.
3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☒ All    b) ☐ Some\*    c) ☐ None    of the:
    1. ☒ Certified copies of the priority documents have been received.
    2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.  
**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
  - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
    - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
  - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

- |  |   |
|--|---|
| <ol style="list-style-type: none"> <li>1. <input type="checkbox"/> Notice of References Cited (PTO-892)</li> <li>2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)</li> <li>3. <input checked="" type="checkbox"/> Information Disclosure Statements (PTO/SB/08),<br/>Paper No./Mail Date <u>12032010; 01042001</u></li> <li>4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit of Biological Material</li> </ol> | <ol style="list-style-type: none"> <li>5. <input type="checkbox"/> Notice of Informal Patent Application</li> <li>6. <input checked="" type="checkbox"/> Interview Summary (PTO-413),<br/>Paper No./Mail Date _____</li> <li>7. <input checked="" type="checkbox"/> Examiner's Amendment/Comment</li> <li>8. <input type="checkbox"/> Examiner's Statement of Reasons for Allowance</li> <li>9. <input type="checkbox"/> Other _____</li> </ol> |
|--|---|

/John R. Hardee/  
 Primary Examiner, Art Unit 1761



### **EXAMINER'S AMENDMENT**

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Mr. Heath Briggs on December 28, 2010.

The application has been amended as follows:

At line 3 of claim 64, insert ---according to claim 35--- after "composition".

At the end of claim 64, delete [, wherein the solution of claim 35 is provided].

At line 3 of claim 66, insert ---according to claim 35--- after "composition".

At the end of claim 66, delete [, wherein the solution of claim 35 is provided].

### ***Allowable Subject Matter***

2. Claims 35, 40, 41, 54, 55, 64, 66 and 73-80 are allowed.
3. Any inquiry concerning this communication or earlier communications from the examiner should be directed to the examiner, Dr. John R. Hardee, whose telephone number is (571) 272-1318. The examiner can normally be reached on Monday through Friday from 8:00 until 4:30. In the event that the examiner is not available, his supervisor, Mr. Harold Pyon, may be reached at (571) 272-1498.

The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8100.

Art Unit: 1761

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/John R. Hardee/  
Primary Examiner  
December 28, 2010

# APPENDIX C

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

<b>In re Application of:</b> <b>MALYSZEWICZ, Christopher, et al.</b>	<b>Docket No.: 76241.010500</b>
<b>Serial No.: 10/556,481</b>	<b>Confirmation No.: 1232</b>
<b>Filing Date: November 14, 2005</b>	<b>Art Unit: 1796</b>
<b>Title: ANTI-VIRAL AND ANTI-BACTERIAL CLEANING COMPOSITION</b>	<b>Examiner: HARDEE, John R.</b>

It is hereby certified that this correspondence is being transmitted to the United States Patent and Trademark Office via the USPTO electronic filing system no later than 11:59 PM local time on December 9, 2010.

Signed: \_\_\_\_\_

Name: Marilyn Morris

**AMENDMENT AND RESPONSE TO OFFICE ACTION AND RESPONSE TO NON-COMPLIANT AMENDMENT**

**Mail Stop Amendment**  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Dear Sir:

This communication is responsive to the Notice of Appeal filed May 5, 2010, and the Notice of Non-Compliant Amendment having a mailing date of December 6, 2010.

**Amendments to the Claims** are reflected in the Listing of Claims, which begins on page 2 of this paper.

**Remarks/Arguments** begin on page 5 of this paper.

A five-month extension of time was requested and an RCE filed in a Response filed on December 6, 2010. Therefore, it is not believed that any additional fees are due in connection with this response. However, any necessary additional fees may be charged to Deposit Account No. 50-2775.

**AMENDMENTS TO THE CLAIMS**

Please replace all prior versions, and listings, of claims with the following claims:

1-34 (Cancelled)

35. (Currently Amended) A cleaning solution ~~consisting essentially of~~comprising:

(a) at least one long chain alkyl polyamine of the formula:



wherein R is a linear or branched alkyl amine chain comprising 10 to 14 carbon atoms;

(b) at least one aliphatic alcohol;

(c) iodine;

(d) at least one amphoteric surfactant; and

(e) at least one antioxidant;

wherein the solution is non-dangerous in accordance with European Dangerous Preparations Directive (99/45/EC) and Dangerous Substances Directive (67/548/EEC).

36-39 (Cancelled)

40. (Previously Presented) A solution according to claim 35, wherein R is a linear alkyl chain.

41. (Previously Presented) A solution according to claim 40, wherein R comprises at least twelve carbon atoms.

42-53 (Cancelled)

54. (Previously Presented) A solution according to claim 35, wherein the solution further comprises a complexing agent adapted to form a complex with the iodine.

55. (Previously Presented) A solution according to claim 35, wherein the solution further comprises at least one buffering agent.



56-63 (Cancelled)

64. (Previously Presented) A means of destroying bacteria and/or inhibiting the ability of bacteria and/or viruses to replicate when said bacteria and/or viruses are present on a surface, the means comprising the application of a composition to said surface wherein the composition is configured to rupture the phospholipid membrane of the bacteria or virus, the composition being further configured to cleave bacterial DNA and/or substantially permanently bind to bacterial DNA and viral DNA or RNA, wherein the solution of claim 35 is provided.

65. (Cancelled)

66. (Previously Presented) A means of inhibiting the ability of bacteria and/or viruses to replicate when said bacteria and/or viruses are present on a surface, the means comprising the application of a composition to said surface wherein the composition is configured to substantially permanently encapsulate the bacteria or virus and prevent the replication of their genetic material, wherein the solution of claim 35 is provided.

67-72 (Cancelled)

73. (Previously Presented) The solution of claim 35, wherein  $R = C_{12}$ .

74. (Previously Presented) The solution of claim 73, wherein the at least one aliphatic alcohol is selected from the group consisting of ethanol and n-propanol.

75. (Previously Presented) The solution of claim 74, wherein the solution contains 10 - 30 vol. % of the at least one aliphatic alcohol.

76. (Previously Presented) The solution of claim 75, wherein solution includes up to about 0.5 wt. % iodine.

77. (Previously Presented) The solution of claim 76, wherein the solution further includes at least one wetting agent.

78. (Previously Presented) The solution of claim 77, wherein the at least one the wetting agent is selected from the group consisting of polyglycol ether, a polyethylene glycol ether, and a polypropylene glycol ether.

79. (Previously Presented) The solution of claim 76, further containing at least one of:

(i) a complexing agent, wherein the complexing agent is adapted to form a complex with the iodine, and;

(ii) a buffering agent.

80. (Previously Presented) The solution of claim 78, further containing at least one of:

(i) a complexing agent, wherein the complexing agent is adapted to form a complex with the iodine, and;

(ii) a buffering agent.

### **REMARKS**

Prior to the instant response, claims 35, 40-41, 54-55, 64, 66, and 73-80 were pending in the application. By amendment herein, claim 35 has been amended. No claims have been added or cancelled. Thus, claims 35, 40-41, 54-55, 64, 66, and 73-80 remain pending.

#### **I. Claim Rejections Under 35 U.S.C. 103**

In the Office Action of November 6, 2009, the Examiner rejected the pending claims as being unpatentable over Eggensperger et al., i.e., U.S. Patent No. 5,276,047 ("D1"), in view of Ofusu-Asante et al., i.e., U.S. Patent No. 6,387,856 ("D2"). For the reasons below, the claims exclude the presence of BIT, and thus are patentable over D1.

Independent claim 35 has been amended to recite that "the solution is non-dangerous in accordance with European Dangerous Preparations Directive (99/45/EC) and Dangerous Substances Directive (67/548/EEC)." Support for this amendment may be found at PARA. 0030 of the published application.

As previously shown, the central focus of D1 is the use of BIT. *See*, pages 8-9 of the October 2, 2009, Amendment and Response. Since BIT is listed as dangerous per the EU regulations, one of ordinary skill in the art would not have used the solution of D1 as a basis for creating the presently claimed non-dangerous cleaning solution.

As shown in Appendix A, page 6, under the claimed EU regulations, the chemical compound BIT (i.e., 1,2-benzisothiazolin-3-one; CAS No. 2634-33-5) has been categorized as "**Dangerous** for the environment" (emphasis added). The "EC Safety Classification" for BIT is: "S24, S26, S37/S39, S61". Per pages 8-10 of Appendix A, these safety codes are defined as:

- S24 - Avoid contact with skin
- S26 - In case of contact with eyes, rinse immediately with plenty of water and seek medical advice
- S37/S39 - Wear suitable protective clothing and eye/face protection
- S61 - Avoid release to the environment. Refer to special instructions /Safety data sheets

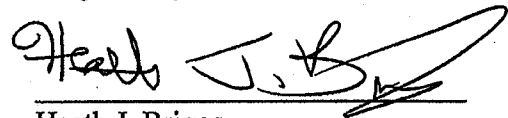
As shown on page 6 of Appendix A, BIT is also potentially a problem for "Reproduction / development effects", and is listed as "harmful" and as an "irritant".

Based on the "danger" to the environment, the "harmful" or "irritant" affect to humans, and the potential "[r]eproduction / development effects" of BIT, one of ordinary skill in the art would not consider the BIT-containing solution of D1 an acceptable starting point for making a "non-dangerous" cleaning solution, as presently claimed. Therefore, the pending claims are patentable over D1.

**IV. Conclusion**

Having responded to all rejections set forth in the outstanding Office Action, it is submitted that all pending claims are in condition for allowance, and notice to that effect is respectfully solicited.

Respectfully submitted,



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**Date: December 9, 2010**

## APPENDIX D

copies respectively-(reductions of 95%, 95%, 99%, 99%), compared to 1000, 1000, 1000, 1000 copies/ml respectively in water control samples. The experiment was repeated with composition/virus incubations of 5, 15, 30 and 60 minutes, as previously stated, but RNA extraction performed with a phenol/chloroform procedure (once with phenol, once with 1:1 phenol and chloroform, and once with chloroform rather than by the QIAGEN extraction method), RNA detection will be detected at 1000, 1000, 1000, and 1000 copies respectively (no reduction in RNA load).

The experiments demonstrate that the composition does not degrade RNA over the periods of 1-60 minutes, but that an interaction occurs between the composition and poliovirus/poliovirus RNA. This interaction inhibits protease action (active in the QIAGEN process) to cleave composition peptides that would normally release RNA, or alters naked RNA ionically, so that RNA cannot then be further captured and amplified in the test. The result is a low recovery of RNA, and will appear as a low copy number in the assay. The effect of the composition-virus interaction is removed during the chemical extraction with phenol. It can be concluded that the composition is not destructive to viral capsids, but inhibits enzymatic cleavage of the capsid, and requires further stringent chemical extraction to achieve release of the nucleic acid. The QIAGEN effect illustrated here is a consistent effect and has been replicated for other RNA and DNA viruses including Adenovirus, BK virus and Norovirus, and appears to be a plausible mechanism of virucidal activity, whereby the altered viral structure is resistance to physiological and enzymatic attack.

It can therefore finally concluded that both viral DNA and viral RNA is not degraded by treatment with the composition. However, the composition interacts with the viral capsid and prevents enzymatic cleavage. Although the process of virus uncoating involves different mechanisms for different virus groups, they all require the viral capsid to have structural and ionic integrity and be susceptible to cellular physiological processes that allow it to pass into and through the host cell, and interact with cellular structures and enzyme systems. The changes induced by the composition on viral structures are likely to prevent this process and account for its virucidal activity.

It is hypothesised that compositions with higher levels of halogen may be useful in some applications, although alterations to the other components, such as raised amounts of alcohol(s), may then be needed for stability.

The composition also has a degree of activity against fungi, moulds and yeasts, although it is believed that a modified formulation, for example with an alternative alcohol blend, might be required for full effectiveness against the tougher walls of fungal spore cells and the like.

Testing has shown that the composition passes the standard "555-challenge" test (see British Standard BS EN 1276:1997 and the French Afnor test). As an effective anti-viral and anti-bacterial cleansing agent, it may be categorised as a (2) category disinfectant in the system employed by the UK National Health Service, suitable for cleaning in "medium high risk" areas.

The invention claimed is:

1. A cleaning solution comprising:

(a) at least one long chain alkyl polyamine of the formula:



wherein R is a linear or branched alkyl amine chain comprising 10 to 14 carbon atoms;

(b) at least one aliphatic alcohol;

(c) iodine;

(d) at least one amphoteric surfactant; and

(e) at least one antioxidant;

wherein the solution is non-dangerous in accordance with European Dangerous Preparations Directive (99/45/EC) and Dangerous Substances Directive (67/548/EEC).

2. A solution according to claim 1, wherein R is a linear alkyl chain.

3. A solution according to claim 2, wherein R comprises at least twelve carbon atoms.

4. A solution according to claim 1, wherein the solution further comprises a complexing agent adapted to form a complex with the iodine.

5. A solution according to claim 1, wherein the solution further comprises at least one buffering agent.

6. A means of destroying bacteria and/or inhibiting the ability of bacteria and/or viruses to replicate when said bacteria and/or viruses are present on a surface, the means comprising the application of a composition according to claim 1 to said surface wherein the composition is configured to rupture the phospholipid membrane of the bacteria or virus, the composition being further configured to cleave bacterial DNA and/or substantially permanently bind to bacterial DNA and viral DNA or RNA.

7. A means of inhibiting the ability of bacteria and/or viruses to replicate when said bacteria and/or viruses are present on a surface, the means comprising the application of a composition to said surface wherein the composition according to claim 1 is configured to substantially permanently encapsulate the bacteria or virus and prevent the replication of their genetic material.

8. The solution of claim 1, wherein  $R = C_{12}$ .

9. The solution of claim 8, wherein the at least one aliphatic alcohol is selected from the group consisting of ethanol and n-propanol.

10. The solution of claim 9, wherein the solution contains 10-30 vol. % of the at least one aliphatic alcohol.

11. The solution of claim 10, wherein solution includes up to about 0.5 wt. % iodine.

12. The solution of claim 11, wherein the solution further includes at least one wetting agent.

13. The solution of claim 12, wherein the at least one the wetting agent is selected from the group consisting of polyglycol ether, a polyethylene glycol ether, and a polypropylene glycol ether.

14. The solution of claim 13, further containing at least one of:

(i) a complexing agent, wherein the complexing agent is adapted to form a complex with the iodine, and;

(ii) a buffering agent.

15. The solution of claim 11, further containing at least one of:

(i) a complexing agent, wherein the complexing agent is adapted to form a complex with the iodine, and;

(ii) a buffering agent.

\* \* \* \* \*

# APPENDIX E

**UNITED STATES PATENT AND TRADEMARK OFFICE  
CERTIFICATE OF CORRECTION**Page 1 of 1

PATENT NO. : 7,915,216  
APPLICATION NO.: 10/556,481  
ISSUE DATE : March 29, 2011  
INVENTOR(S) : Christopher Malyszewicz

It is certified that an error appears or errors appear in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

Section (30) Foreign Application Priority Data, in the bibliographic data of the issued patent: insert --July 30, 2003 (GB) PCT/GB03/03296--

Replace claim 7 with the following claim:

--7. A means of inhibiting the ability of bacteria and/or viruses to replicate when said bacteria and/or viruses are present on a surface, the means comprising the application of a composition according to claim 1 to said surface wherein the composition is configured to substantially permanently encapsulate the bacteria or virus and prevent the replication of their genetic material, wherein the solution of claim 1 is provided.--

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